

IN THE CLAIMS:

Please substitute the following claims for the same-numbered claims in the application:

1-13. (Canceled)

14. (Currently Amended) A method for determining a manner of classifying data samples in one of a number of predetermined classes comprising first and second classes, said method comprising:

associating a plurality of data classifiers in a decision fusion application comprising said data sample samples, wherein said data classifiers indicate a manner of classifying said data sample in said one of a number of first classes;

computing sample confidence values for each data sample;

determining an overall confidence value for said first classes using said sample confidence values;

assigning a weight value for each of said plurality of data classifiers as a function of said overall confidence value and said sample confidence values;

classifying each said data sample in a second class by calculating a combined log-likelihood value for each second class, wherein said log-likelihood comprises a summation of likelihoods of said plurality of data classifiers weighted by said weight value; and

classifying a calculated second class as a correct class for a particular data sample by selecting a particular second class with a highest calculated combined log-likelihood value[;].
and

~~improving a classification accuracy of said decision fusion application based on said correct class.~~

15. (Currently Amended) The method of claim 14, ~~wherein said weight value for said each of said plurality of data classifiers comprises a data sample confidence component, wherein said data sample confidence component includes values comprises~~ a linear combination of an order statistic.

16. (Currently Amended) The method of claim 15, wherein said linear combination is ~~defined by~~ comprises a log-likelihood of respective predetermined classes for said plurality of data classifiers corresponding to said data sample.

17. (Currently Amended) The method of claim 15, wherein said ~~linear combination for a particular data sample comprises a difference between a most likely and a second most likely class associated with a particular classifier~~ plurality of data classifiers comprise audio data classifiers and video data classifiers.

18. (Currently Amended) The method of claim 16, wherein the weight value comprises said data sample confidence component equaling values comprises said log-likelihood of respective predetermined classes for said plurality of data classifiers corresponding to said data sample, and a cumulative component comprising said overall confidence value comprises a mean of said data sample confidence component values over a plurality of said data samples.

19. (Currently Amended) The method of claim 18, wherein said ~~cumulative component overall confidence value~~ is successively updated with said data sample confidence component values of each said data sample.

20. (Currently Amended) A program storage device readable by computer, tangibly embodying a program of instructions executable by said computer to perform a method for determining a manner of classifying data samples in one of a number of predetermined classes comprising first and second classes, said method comprising:

associating a plurality of data classifiers in a decision fusion application comprising said data sample samples, wherein said data classifiers indicate a manner of classifying said data sample in said one of a number of first classes;

computing sample confidence values for each data sample;

determining an overall confidence value for said first classes using said sample confidence values;

assigning a weight value for each of said plurality of data classifiers as a function of said overall confidence value and said sample confidence values;

classifying each said data sample in a second class by calculating a combined log-likelihood value for each second class, wherein said log-likelihood comprises a summation of likelihoods of said plurality of data classifiers weighted by said weight value; and

classifying a calculated second class as a correct class for a particular data sample by selecting a particular second class with a highest calculated combined log-likelihood value[[;]].

and

~~improving a classification accuracy of said decision fusion application based on said correct class.~~

21. (Currently Amended) The program storage device of claim 20, wherein ~~said weight value for said each of said plurality of data classifiers comprises a data sample confidence component, wherein said data sample confidence component includes values comprises~~ a linear combination of an order statistic.

22. (Currently Amended) The program storage device of claim 21, wherein ~~said linear combination is defined by comprises~~ a log-likelihood of respective predetermined classes for said plurality of data classifiers corresponding to said data sample.

23. (Currently Amended) The program storage device of claim 21, wherein ~~said linear combination for a particular data sample comprises a difference between a most likely and a second most likely class associated with a particular classifier~~ plurality of data classifiers comprise audio data classifiers and video data classifiers.

24. (Currently Amended) The program storage device of claim 22, wherein ~~the weight value comprises said data sample confidence component equaling values comprises~~ said log-likelihood of respective predetermined classes for said plurality of data classifiers corresponding to said data sample, and a cumulative component comprising said overall confidence value comprises a

mean of said data sample confidence component values over a plurality of said data samples.

25. (Currently Amended): The program storage device of claim 24, wherein said cumulative component overall confidence value is successively updated with said data sample confidence component values of each said data sample.

26. (Currently Amended): An apparatus for determining a manner of classifying data samples in one of a number of predetermined classes comprising first and second classes, said apparatus comprising:

means for associating a plurality of data classifiers in a decision fusion application comprising said sample samples, wherein said data classifiers indicate a manner of classifying said data sample in said one of a number of first classes;

means for computing sample confidence values for each data sample;

means for determining an overall confidence value for said first classes using said sample confidence values;

means for assigning a weight value for each of said plurality of data classifiers as a function of said overall confidence value and said sample confidence values;

means for classifying each said data sample in a second class by calculating a combined log-likelihood value for each second class, wherein said log-likelihood comprises a summation of likelihoods of said plurality of data classifiers weighted by said weight value; and

means for classifying a calculated second class as a correct class for a particular data sample by selecting a particular second class with a highest calculated combined log-likelihood

value[[;]], and

~~means for improving a classification accuracy of said decision fusion application based on said correct class.~~

27. (Previously Presented) The method of claim 14, ~~wherein said plurality of data classifiers comprise audio and video classifiers, and wherein said decision fusion application comprises an audiovisual speech recognition application.~~

28. (Canceled).

29. (Currently Amended) The method of claim 28 14, further comprising determining a relative confidence level relating to an accuracy of said plurality of data classifiers for each data sample in said decision fusion application based on ~~a data sample confidence component and said overall confidence component~~ said sample confidence values and said overall confidence value.

30. (Previously Presented) The program storage device of claim 20, ~~wherein said plurality of data classifiers comprise audio and video classifiers, and wherein said decision fusion application comprises an audiovisual speech recognition application.~~

31. (Canceled).

32. (Currently Amended) The method program storage device of claim 31 20, wherein said method further comprising comprises determining a relative confidence level relating to an accuracy of said plurality of data classifiers for each data sample in said decision fusion application based on ~~a data sample confidence component and said overall confidence component~~ said sample confidence values and said overall confidence value.